NOTES ON A NEST OF THE HONEY ANT, *PLAGIOLEPIS SQUAMULOSA* WHEELER, IN THE NORTHERN TERRITORY, AUSTRALIA

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Abstract

A dormant nest of a honey ant, presumed to be *Plagiolepis squamulosa*, was discovered during the excavation of an active nest of the black honey ant, *Camponotus inflatus* Lubbock, at Uluru National Park, Northern Territory, Australia. The *P. squamulosa* nest consisted of three chambers at depths of 26-42 cm and housed 5 de-alated queens, 114 workers, 96 repletes and 31 semi-repletes. The small repletes had greatly distended gasters but were mobile. Aborigines do not eat the repletes.

Introduction

Several genera of ants store food in distended crops which cause their gasters to become greatly enlarged. These storage ants, called repletes, are best developed in some species of *Myrmecocystus* in North America, *Camponotus inflatus* and *Melophorus bagoti* in Australia, some *Leptomyrmex* species in Australia, New Guinea, and New Caledonia, and *Plagiolepis trimeni* of Natal, South Africa (McCook 1882; Forel 1895; Wheeler 1910; Creighton 1950; Wilson 1971). *Plagiolepis* is cosmopolitan, but mostly paleotropical, so it is not surprising that repletes have also been reported in Australian species (*P. nynganensis* and *P. squamulosa*) (Wheeler 1934; McAreavey 1949; Taylor 1987, pers. comm., 1987).

Materials and methods

A colony of ants presumed to be *Plagiolepis squamulosa* was uncovered in August 1987 during the excavation of a black honey ant nest, *Camponotus inflatus*, 3.8 km from the Ranger Station in Uluru National Park (Ayers Rock) in the Northern Territory of Australia. All ants were collected and preserved. Voucher specimens were sent to Dr Robert Taylor for the Australian National Insect Collection.

Results and Discussion

The *Plagiolepis* nest was at the periphery of the C. *inflatus* nest, 95 cm away from the entrance, among the roots of a mulga tree. It contained three chambers at depths of 26 cm, 34 cm and 42 cm. No entrance or surface activity was noted. The soil temperature was 15.6-16.7°C. One chamber was 2-3 cm long, 1-2 cm wide and 0.5 cm high. Repletes hung from the chamber ceilings. When dislodged they could right themselves if overturned and some carried larvae, refuting the belief that they are immobile (Wheeler 1910).

The population of the colony was 246: 114 workers, 96 repletes, 31 semi-repletes and 5 de-alated queens. Larvae and one pupa were also observed. These numbers far exceed the seven ants and two repletes Wheeler (1934) found under a stone in Western Australia. Two different forms were found: small black workers (1.4-2.4 mm long) without ocelli and larger yellow-

brown semi-repletes and repletes with ocelli. This could indicate inquilinism (Le Masne 1956; Passera 1966; 1968). Repletes are small, but have greatly distended gasters 2.0-3.5 mm long and a total length up to 4.4 mm. The gaster measurement is smaller than the 4.5 mm of *P. trimeni* repletes (Wheeler 1910) and considerably smaller than the largest repletes of *C. inflatus* (14.5 mm) and *M. mexicanus* (12 mm) (Conway 1990). The five dealated queens in the Uluru nest were 3.5-4 mm long. Each had a reddish head and thorax and blackish to brownish gaster. Polygny has also been reported in European ant, *Plagiolepis pygmaea* Latreille, which averages 17 laying queens per nest (Mercier *et al.* 1985).

Although Aborigines commonly eat repletes of the black honey ant, *C. inflatus*, women from the Mutitjulu community at Uluru were not familiar with this small honey ant.

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